UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,300	04/05/2005	Hiroshi Saitou	10873.1632USWO	3009

52835 7590 05/12/2008

HAMRE, SCHUMANN, MUELLER & LARSON, P.C.
P.O. BOX 2902
MINNEAPOLIS, MN 55402-0902

EXAMINER	
KHAN, ASHER R	

ART UNIT	PAPER NUMBER
4134	

MAIL DATE	DELIVERY MODE
05/12/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/530,300	SAITOU ET AL.	
	Examiner	Art Unit	
	ASHER KHAN	4134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 April 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/5/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> A person shall be entitled to a patent unless –(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,272,610 B1 to Katayama et al. "Katayama".

As to claim 1, Katayama discloses a data recording device that records data into a semiconductor memory pack device that includes a plurality of flash memories (Fig. 1, Flash memory arrays, 5) performing recording operations in parallel (See Fig. 1; col. 4, lines 39-46; Col. 5, lines 15-20 and Col. 6, lines 3-17 and claim 1), the data recording device comprising: a file management portion (Fig. 1, file control circuit, 4) for managing data that is to be recorded into the semiconductor memory pack (Fig. 1, Flash memory arrays, 5) device as a file; wherein the file management portion(Fig. 1, File control circuit, 4) sets a data recording unit (unit erasure block) of data that is to be supplied to the semiconductor memory pack device to a common multiple of a size obtained by adding up the sizes of erase blocks of the plurality of flash memories and a data management size (2048 bytes) of the file management portion(Figs. 4, 5A, 5B and 10; Abstract; col. 2, lines 15-33; Col. 4, lines 53-67; Col. 5, lines 1-67;Col. 6, lines 1-24;Col. 13, lines 15-27).

As to claim 2, Katayama further discloses wherein a data recording unit is an integral multiple of the size obtained by adding up the sizes of the erase blocks of the plurality of flash memories and wherein a data management unit (2048 bytes) of the file management portion (Fig. 1, File control circuit, 4) has the same size as the data recording unit (unit erasure block) (Figs. 4, 5A, 5B and 10;Col. 2, lines 15-33;Col. 4, lines 53-67; Col. 5, lines 1-67;Col. 6, lines 1-24;Col. 13, lines 15-27).

As to claim 3, Katayama further discloses wherein the file management portion (Fig. 1, file control circuit, 4) lets each data recording unit (unit erasure block) include only data of the same file (Col 5. lines 38-46)(Figs 5A and 5B, Memory groups 1 through 4 have same recorded file in the top row with file 1).

As to claim 4, Katayama further discloses wherein the file management portion records data only when the semiconductor memory pack device includes free space that is equivalent to the data recording unit (Col. 5, lines 21-46).

As to claim 8, wherein the flash memories are mounted on the semiconductor memory pack device as semiconductor memory cards (Abstract).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,272,610 B1 to Katayama et al. "Katayama" in view of U.S. Patent 6,522,268 B2 to Belu.

As to claim 5, Katayama fails to disclose wherein when data of different files is recorded in the data recording unit , the file management portion sorts recording data in such a manner that the data recording unit includes only data of the same file ; .

Belu discloses wherein when data of different files (file list 202) is recorded in the data recording unit, the file management portion sorts recording data (files of ".doc" extension or ".cpp" extension) in such a manner that the data recording unit includes only data of the same file (Fig 2) (col. 5, lines 42-47)(Col. 7, lines 39-58).

At the time of invention, it would have been obvious to a person of ordinary skill in the art combine Katayama with the teaching of Belu. Motivation to combine would have been to improve compression ratio and speed for first stage compression.

Therefore it would have been obvious to combine Katayama with the teaching of Belu to make the modification as described in claim 5.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,272,610 B1 to Katayama et al. "Katayama" in view of Japanese Document NO. JP 2000-57038 to Naoya Haneda "Haneda".

As to claim 6, Katayama fails to disclose wherein the semiconductor memory pack device is provided with a region into which file management information of the file management portion is recorded; and wherein when the file management portion records at least two files of an audio data file and a video data file simultaneously and in

parallel into the semiconductor memory pack device, the file management information that is recorded in the semiconductor memory pack device is updated at a time when an amount of audio data accumulated as data that is to be supplied to the semiconductor memory pack device becomes an integral multiple of the data recording unit.

As to claim 6, Katayama further discloses wherein the semiconductor memory pack device is provided with a region into which file management information of the file management portion is recorded(Figs 5A and 5B)(Col. 10, lines 40-51)(Col. 14, lines 18-25); and wherein when the file management portion records at least two files (Figs 5A and 5B, 5-2 and 6-1) simultaneously and in parallel into the semiconductor memory pack device, the file management information (Figs. 5A and 5B, files 1-1, 1-2, 1-3, 1-4) that is recorded in the semiconductor memory pack device is updated at a time when an amount of audio data accumulated as data (files 1-1,1-2, 1-3, 1-4) that is to be supplied to the semiconductor memory pack device becomes an integral multiple ("amount of certain level" when 1-4 sector are filled with data) of the data recording unit(unit erasure block) (Abstract) (From Figs. 5A and 5B when files 1-1, 1-2, 1-3, 1-4 are stored and filled up in the sector 1-4 the information in 5A and 5B is updated)(Col. 10, lines 40-67; Col. 11, lines 1-4).

Katayama fails to disclose files as being audio data file and a video data files in parallel.

Haneda discloses recording of audio and video files in parallel (0002-0010) (0031).

At the time of invention, it would have been obvious to a person of ordinary skill in the art combine Katayama with the teaching of Haneda. Motivation to combine would have been to allow audio and video recordings on flash memory drives to make it compact and easy for a user to carry more audio and video media to play on a device supporting flash memories.

Therefore it would have been obvious to combine Katayama with the teaching of Haneda to make the modification as described in claim 6.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,272,610 B1 to Katayama et al. "Katayama" in view of U.S. Patent Pub. 2001/0043803 A1 to Saeki et al. "Saeki"

As to claim 7, Katayama fails to disclose wherein when the file management portion records an MPEG stream into a file, the file management information of the file management portion is updated at a time when an amount of recorded data becomes an integral multiple of 1 GOP.

Saeki discloses wherein when the file management portion (AV data input unit 111) records an MPEG stream into a file (AV file which is in MPEG), the file management information (AV data management file) of the file management portion is updated at a time when an amount of recorded data becomes an integral multiple of 1 GOP (GOP information)(0151-0152).

At the time of invention, it would have been obvious to a person of ordinary skill in the art combine Katayama with the teaching of Saeki. Motivation to combine would have been to allow recording upon a request of recording by a user.

Therefore it would have been obvious to combine Katayama with the teaching of Saeki to make the modification as described in claim 7.

7. **Claim 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,272,610 B1 to Katayama et al. "Katayama" in view of U.S. Patent 6,873,788 B1 Nishimura et al. "Nishimura" and in further view of U.S. Patent 6,330,653 B1 to Murray et al. "Murray".**

As to claim 9, Katayama discloses data recording device that records data according to a file system into a semiconductor memory pack device that includes a plurality of flash memories, wherein the file system manages a total number of sectors obtained by adding the number of existing sectors in the semiconductor memory pack device (Abstract)(Fig 5A and 5B)(Col. 10, lines 40-56) (Col. 4, lines 39-67;Col. 5, lines 1-14)

Katayama fails to disclose storing a value that does not indicate a free region in entries of clusters.

Nishimura discloses storing a value that does not indicate a free region in entries of clusters (Col 6, lines 32-39).

At the time of invention, it would have been obvious to a person of ordinary skill in the art combine Katayama with the teaching of Nishimura. Motivation to combine would have been to allow a recording device to not overwrite on a file in a region that is been written into. So the file can be accessed at a later time.

Katayama fails to disclose a FAT file system with virtual sectors.

Murray discloses FAT file system with virtual sectors (Col. 12, lines 12-27).

At the time of invention, it would have been obvious to a person of ordinary skill in the art combine Katayama as modified with the teaching of Hiroki. Motivation to combine would have been to realize an information processor capable of commonly using flash memory elements whose specifications are different, and efficiently performing file management by a simple processing.

As to claim 10, Nishimura further discloses wherein all bits in the FAT entries are set to 1 indicating an end of file, as the value that does not indicate a free region (Col. 6, lines 32-39). In addition same motivation is used as the rejection for claim 9.

Therefore it would have been obvious to combine Katayama with the teaching of Nishimura with the teaching of Hiroki to make the modification as described in claim 9 and 10.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ASHER KHAN whose telephone number is (571)270-5203. The examiner can normally be reached on Monday-Friday 9:30 am - 5 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lun Yi can be reached on (571)272-7671. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. K./
Examiner, Art Unit 4134

/LUN-YI LAO/
Supervisory Patent Examiner, Art Unit 4134